

WHAT IS CLAIMED IS:

1. A process for preparing a paint, comprising:
providing a first paint having at least one optical property chosen from tint strength, color, opacity, and whiteness; and
combining at least one white pigment with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint;
wherein the at least one white pigment includes a white pigment other than TiO_2 .
2. The process according to claim 1, wherein the white pigment other than TiO_2 is chosen from plastic pigments and white minerals.
3. The process according to claim 1, wherein the white pigment other than TiO_2 is in slurry form.
4. The process according to claim 2, wherein the white minerals are chosen from silica, calcium sulfate, feldspar, limestone, dolomite, chalk, brucite, halloysite, zeolite, smectite, mica, nephylite syenite, aluminum trihydroxide, alumina, zirconia, lead oxide, lead carbonate, zinc oxide, zinc sulfide, barium sulfate, barite, and aluminum silicate.
5. The process according to claim 2, wherein the white minerals are chosen from white synthetic pigments chosen from precipitated calcium carbonate, precipitated magnesium hydroxide, precipitated silica, precipitated barium sulfate, and synthetic aluminum trihydroxide.
6. The process according to claim 2, wherein the white minerals are wet-ground.
7. The process according to claim 2, wherein the white minerals are dry-ground.
8. The process according to claim 2, wherein the white mineral comprises diatomaceous earth.
9. The process according to claim 8, wherein the diatomaceous earth comprises flux-calcined diatomaceous earth.

10. The process according to claim 2, wherein the white mineral comprises kaolin.

11. The process according to claim 10, wherein the kaolin is chosen from calcined kaolin, hydrous kaolin, and mixtures thereof.

12. The process according to claim 10, wherein the kaolin comprises a delaminated kaolin.

13. The process according to claim 10, wherein the kaolin comprises a partially calcined kaolin.

14. The process according to claim 10, wherein the kaolin comprises a fully calcined kaolin.

15. The process according to claim 10, wherein the kaolin comprises a flash calcined kaolin.

16. The process according to claim 2, wherein the plastic pigments are chosen from homopolymers and copolymers comprising monomers chosen from acrylate monomers, alkyl acrylate monomers, ester monomers, vinyl monomers, and styrene monomers.

17. The process according to claim 2, wherein the white mineral comprises calcium carbonate.

18. The process according to claim 2, wherein the white mineral comprises talc.

19. The process according to claim 2, wherein the white mineral comprises calcium carbonate and calcined kaolin.

20. The process according to claim 2, wherein the white mineral comprises crystalline silicas.

21. The process according to claim 1, wherein the paint has a pigment volume concentration ranging from about 35% to about 50%.

22. The process according to claim 1, wherein the paint has a pigment volume concentration ranging from about 50% to about 60%.

23. The process according to claim 1, wherein the paint has a pigment volume concentration ranging from about 60% to about 70%.

24. The process according to claim 1, wherein the paint has a pigment volume concentration ranging from about 70% to about 85%.

25. The process according to claim 1, wherein the first and second paints are latex paints.

26. The process according to claim 1, wherein the first and second paints are oil-based paints.

27. The process according to claim 1, wherein the first and second paints are acrylic paints.

28. The process according to claim 1, wherein the second paint has a PVC greater than CPVC.

29. The process according to claim 1, wherein the second paint has a PVC below CPVC.

30. The process according to claim 1, wherein the at least one white pigment other than TiO₂ has an oil absorption of at least about 100%.

31. The process according to claim 1, wherein the at least one white pigment other than TiO₂ has an oil absorption of at least about 110%.

32. The process according to claim 1, wherein the at least one optical property of the first and second paints is tint strength.

33. The process according to claim 1, wherein the at least one optical property of the first and second paints is color.

34. The process according to claim 1, wherein the at least one white pigment other than TiO₂ is a blend comprising at least two white pigments.

35. The process according to claim 34, wherein the at least one white pigment other than TiO₂ is a blend comprising at least two white minerals.

36. The process according to claim 35, wherein the blend comprises calcined kaolin and calcium carbonate.

37. The process according to claim 1, further comprising measuring the at least one optical property of the first paint prior to the combining.

38. The process according to claim 37, further comprising determining an amount of the at least one white pigment for combining with the first paint, based on the measured at least one optical property.

39. A paint prepared by the process according to claim 1.

40. A process for preparing a paint, comprising:

providing a first paint having at least one optical property, the first paint having a pigment volume concentration ranging from about 50% to about 60% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining talc with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

41. The process according to claim 40, wherein the at least one optical property of the first and second paints is tint strength.

42. A process for preparing a paint, comprising:

providing a first paint having at least one optical property, the first paint having a pigment volume concentration ranging from about 35% to about 70% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining calcined kaolin with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

43. The process according to claim 42, wherein the at least one optical property of the first and second paints is tint strength.

44. A process for preparing a paint, comprising:

providing a first paint having at least one optical property, the first paint having a pigment volume concentration of at least about 70% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining hydrous kaolin with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

45. The process according to claim 44, wherein the at least one optical property of the first and second paints is tint strength.

46. A process for preparing a paint, comprising:
providing a first paint having at least one optical property, the paint having a pigment volume concentration ranging from about 60% to about 70% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining calcium carbonate with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

47. The process according to claim 46, wherein the at least one optical property of the first and second paints is tint strength.

48. A process for preparing a paint, comprising:
providing a first paint having at least one optical property, the first paint having a pigment volume concentration of at least about 70% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining feldspar with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

49. The process according to claim 48, wherein the at least one optical property of the first and second paints is tint strength.

50. A process for preparing a paint, comprising:
providing a first paint having at least one optical property, the first paint having a pigment volume concentration of at least about 70% and the at least one optical property being chosen from tint strength, opacity, color, and whiteness;

combining calcium carbonate and kaolin with the first paint in an amount effective to form a second paint having at least one optical property of a different value from the at least one optical property of the first paint.

51. The process according to claim 50, wherein said kaolin comprises a calcined kaolin.

52. The process according to claim 50, wherein the at least one optical property of the first and second paints is tint strength.

53. The process according to claim 50, wherein the at least one optical property of the first and second paints is color.

54. The process according to claim 53, wherein the color of the second paint is lightened compared to the color of the first paint.

55. A process for preparing a PVC tinted system, comprising:
providing a first medium having at least one optical property chosen from tint strength, opacity, color, and whiteness; and

combining at least one white pigment with the first medium in an amount effective to form a second medium having at least one optical property of a different value from the at least one optical property of the first medium;

wherein the at least one white pigment includes a white pigment other than TiO_2 .

56. The process according to claim 55, wherein the first and second media are chosen from paints, inks, colorable sealants, colorable caulk, grout, synthetic stucco, block filler, and plastics.